

IN THE CLAIMS:

The text of all pending claims (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. When strikethrough cannot easily be perceived, or when five or fewer characters are deleted, [[double brackets]] are used to show the deletion. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 12, 38 and 40, and CANCEL claims 39 and 41 without prejudice or disclaimer in accordance with the following (The identifier for claim 36 has been corrected to PREVIOUSLY PRESENTED):

1. (CURRENTLY AMENDED) An apparatus for adjusting a brightness and a color temperature of a screen on which input RGB color signals are displayed, the apparatus comprising:

a RGB color signal generator to detect a maximum value of each of the RGB color signals, to compare the maximum values, to detect a color signal having a higher maximum value than the other color signals of the RGB color signals, ~~and to increase the color temperature of the detected color signal to a predetermined value to compensate for the color temperature of the detected color signal,~~ detecting a total maximum value of the RGB color signals, and storing the total maximum value of the RGB color signals; and

a system controller to provide a predetermined critical value, the predetermined value, and data on conditions for detecting a color signal having the higher maximum value than the other color signals to the RGB color signal generator,

wherein the RGB color signal generator increases or decreases a brightness level of an image displayed on the screen by one of a plurality of predetermined ratios based on the comparison result,

wherein the RGB color signal generator generates RGB color signals having decreased brightness by decreasing the brightness level of the image by one of the plurality of the predetermined ratios if the total maximum value is greater than a first predetermined critical value, determined in a case wherein a brightness level of pixels in an area of the screen from which the total maximum value is detected corresponds to full white,

wherein the RGB color signal generator generates RGB color signals having increased brightness by increasing the brightness level of the image by one of the plurality of the predetermined ratios if the total maximum value is less than a second predetermined critical value, determined in consideration of a case wherein a brightness level of pixels in the area of the screen from which the total maximum value is detected corresponds to full black, and

wherein the detecting and storing the total maximum value of the RGB color signals includes windowing a predetermined area of the screen, and then detecting the total maximum value of the RGB color signals in the predetermined area.

2. (PREVIOUSLY PRESENTED) The apparatus of claim 1, wherein the predetermined critical value comprises a first predetermined critical value determined in a case where the brightness level of pixels in an area of the screen from which the total maximum value is detected corresponds to full white, and a second predetermined critical value determined in a case where the brightness level of pixels in the area corresponds to full black.

3. (PREVIOUSLY PRESENTED) The apparatus of claim 2, wherein if the total maximum value is greater than the first predetermined critical value, the RGB color signal generator generates less bright RGB color signals by decreasing the brightness level of the image on the screen by one of the predetermined ratios, and if the total maximum value is less than the second predetermined critical value, the RGB color signal generator generates brighter RGB color signals by increasing the brightness level of the image on the screen by another of the predetermined ratios.

4. (PREVIOUSLY PRESENTED) The apparatus of claim 3, wherein the predetermined ratios are set using data provided from the system controller based on a reference data input by a user.

5. (ORIGINAL) The apparatus of claim 1, wherein the RGB color signal generator windows a predetermined area of the screen, and then detects the total maximum value of the RGB color signals in the predetermined area.

6. (ORIGINAL) The apparatus of claim 5, wherein the predetermined area is determined depending on a highest resolution supported by the screen on which the image is displayed.

7. (ORIGINAL) The apparatus of claim 1, wherein the brightness of the screen is automatically adjusted.

8. (CANCELLED)

9. (PREVIOUSLY PRESENTED) The apparatus of claim 1, wherein the data on the

conditions for detecting a color signal having the higher maximum value than the other color signals includes a reference value used in comparing the maximum values and detecting the color signal having the higher maximum value than the other color signals, and the reference value is set based on a difference value such that a user perceives a maximum value of the color signal displayed on the screen to be higher than those of the other color signals.

10. (PREVIOUSLY PRESENTED) The apparatus of claim 1, wherein the RGB color signal generator detects the maximum values of the RGB color signals in each frame.

11. (PREVIOUSLY PRESENTED) The apparatus of claim 1, wherein the color temperature of the screen is automatically adjusted.

12. (CURRENTLY AMENDED) An apparatus adjusting brightness and color temperature of a screen on which input RGB color signals are displayed, the apparatus, comprising:

an RGB color signal generator to determine a maximum value of each of a plurality of color signals comprising the RGB color signals and a total maximum value of the input RGB color signals, to compare the total maximum value with a predetermined critical value, to generate other RGB color signals so as to increase or decrease a brightness level of the input RGB color signals based on the comparison result, to compare the maximum values and if one of the maximum values is greater than the others to generate at least one RGB color signal having a color temperature varying by a predetermined value, detecting a total maximum value of the RGB color signals, and storing the total maximum value of the RGB color signals; and

a system controller to provide the RGB color signal generator with data on the predetermined critical value, a reference value used for detecting the color signal having the higher maximum value than the others, and the predetermined value,

wherein the RGB color signal generator generates RGB color signals having decreased brightness by decreasing the brightness level of the image by one of the plurality of the predetermined ratios if the total maximum value is greater than a first predetermined critical value, determined in a case wherein a brightness level of pixels in an area of the screen from which the total maximum value is detected corresponds to full white,

wherein the RGB color signal generator generates RGB color signals having increased brightness by increasing the brightness level of the image by one of the plurality of the predetermined ratios if the total maximum value is less than a second predetermined critical value, determined in consideration of a case wherein a brightness level of pixels in the area of the screen from which the total maximum value is detected corresponds to full black, and

wherein the detecting and storing a total maximum value of the RGB color signals includes windowing a predetermined area of the screen, and then detecting the total maximum value of the RGB color signals in the predetermined area.

13. (ORIGINAL) The apparatus of claim 12, wherein the color temperature of the detected color signal is increased to the predetermined value.

14. (ORIGINAL) The apparatus according to claim 12, wherein the color temperature and the brightness of the screen are automatically adjusted.

15. (WITHDRAWN) A method of adjusting brightness of a screen on which input RGB color signals are displayed, comprising:
detecting a total maximum value of the input RGB color signals;
comparing the total maximum value with first and second predetermined critical values;
if the total maximum value is greater than the first predetermined critical value, decreasing a brightness level of an image at a predetermined ratio by generating another RGB color signal having a decreased brightness level; and
if the total maximum value is less than the second predetermined critical value, increasing a brightness level of the image by a predetermined ratio by generating another RGB color signal having an increased brightness level.

16. (WITHDRAWN) The method of claim 15, wherein the first predetermined critical value is determined in a case where the brightness level of pixels in an area of the screen from which the total maximum value is detected corresponds to substantially full white, and the second predetermined critical value is determined considering a case where the brightness level of pixels in an area of the screen from which the total maximum value is detected corresponds to substantially full black.

17. (WITHDRAWN) The method of claim 15, wherein the total maximum value is detected from a plurality of pixels in an area of the screen determined in consideration of a highest resolution supported by the screen on which the RGB color signals are displayed.

18. (WITHDRAWN) The method according to claim 15, wherein the adjusting brightness of the screen is automatic.

19. (WITHDRAWN) A method of adjusting a color temperature of a screen on which

input RGB color signals are displayed, the method comprising:

- detecting maximum values of a plurality of color signals comprising the RGB color signals;

- comparing the maximum values so as to detect the color signal having a higher maximum value than the others; and

- if one of the maximum values is higher than the others, generating another RGB color signal having a color temperature increased to a predetermined value.

20. (WITHDRAWN) The method according to claim 19, wherein the adjusting the color temperature of the screen is automatic.

21. (WITHDRAWN) A method of adjusting brightness and a color temperature of a screen on which input RGB color signals are displayed, the method comprising:

- detecting and storing maximum values of color signals comprising the input RGB color signals;

- detecting and storing a total maximum value of the RGB color signals;

- comparing the maximum values to detect the color signal having a higher maximum value than the others;

- if one of the maximum values is higher than the others, generating another RGB color signal having a color temperature increased to a predetermined value; and

- comparing the total maximum value with a predetermined critical value and generating another RGB color signal, having a brightness increased or decreased based on the comparison result.

22. (WITHDRAWN) The method of claim 21, wherein in if the total maximum value is greater than a first predetermined critical value, determined in case where a brightness level of pixels in an area of the screen from which the total maximum value is detected corresponds to substantially full white, then a brightness level of an image is decreased by a predetermined ratio to generate another RGB color signal having decreased brightness, and if the total maximum value is less than a second predetermined critical value, determined in consideration of a case where brightness level of pixels in the area of the screen from which the total maximum value is detected corresponds to substantially full black, then a brightness level of the image is increased by a predetermined ratio to generate a RGB color signal having increased brightness.

23. (WITHDRAWN) The method according to claim 22, wherein the adjusting brightness and the color temperature of the screen are automatic.

24. (WITHDRAWN) A display adjusting apparatus for a display, comprising:
a first circuit having a first adjustment ability; and
a second circuit having a second adjustment ability;
wherein the first adjustment ability is automatically adjusting a color temperature of the display, and the second adjustment ability is automatically adjusting a brightness of the display.

25. (WITHDRAWN) A display adjusting apparatus, as set forth in claim 24, wherein the first circuit and the second circuit each include a RGB color signal generator.

26. (WITHDRAWN) A display adjusting apparatus for a display, comprising:
a command applying unit providing a reference brightness level and color temperature value;
a system controller setting a windowing area in the display based on the reference brightness level and color temperature value and determining display adjustment values; and
an RGB color signal generator generating a signal based on the display adjustment values.

27. (WITHDRAWN) The display adjusting apparatus as set forth in claim 26, further comprising:
an on-screen display having a menu where the reference brightness level and color temperature value may be set by a user.

28. (WITHDRAWN) A method of display adjustment for a display, comprising:
setting a windowing area on the display;
detecting and storing a maximum value of each of a plurality of color signals comprising RGB color signals in the windowing area;
detecting and storing a total maximum value of the plurality of the RGB color signals;
comparing the maximum value of each color signal to detect a first difference value;
comparing the first difference value to a first reference value to generate a first comparison value;
adjusting the display depending on the first comparison value;
comparing the total maximum value to a second reference value to generate a second comparison value; and
adjusting the display depending on the second comparison value.

29. (WITHDRAWN) The method of display adjustment, according to claim 28, wherein the

adjusting the display depending on the first comparison value is a brightness level adjustment, and the adjusting the display depending on the second comparison value is a color temperature adjustment.

30. (WITHDRAWN) A computer-readable medium encoded with processing instructions for implementing a method of adjusting brightness of a screen on which input RGB color signals are displayed, the method comprising:

detecting a total maximum value of the input RGB color signals;

comparing the total maximum value with first and second predetermined critical values;

if the total maximum value is greater than the first predetermined critical value, decreasing a brightness level of an image at a predetermined ratio by generating another RGB color signal having a decreased brightness level; and

if the total maximum value is less than the second predetermined critical value, increasing the brightness level of the image by a predetermined ratio by generating another RGB color signal having an increased brightness level.

31. (WITHDRAWN) The computer-readable medium according to claim 30, wherein the first predetermined critical value is determined in a case where a brightness level of pixels in an area of the screen from which the total maximum value is detected corresponds to substantially full white, and the second predetermined critical value is determined considering a case where the brightness level of pixels in an area of the screen from which the total maximum value is detected corresponds to substantially full black.

32. (WITHDRAWN) The computer-readable medium according to claim 30, wherein the total maximum value is detected from a plurality of pixels in an area of the screen determined in consideration of a highest resolution supported by the screen on which the RGB color signals are displayed.

33. (WITHDRAWN) A computer-readable medium encoded with processing instructions for implementing a method of adjusting brightness of a screen on which input RGB color signals are displayed, the method comprising:

detecting maximum values of a plurality of color signals comprising the RGB color signals;

comparing the maximum values so as to detect the color signal having a higher

maximum value than the others; and

if one of the maximum values is higher than the others, generating another RGB color signal having a color temperature increased to a predetermined value.

34. (WITHDRAWN) A computer-readable medium encoded with processing instructions for implementing a method of adjusting brightness of a screen on which input RGB color signals are displayed, the method comprising:

detecting and storing maximum values of color signals comprising the input RGB color signals;

detecting and storing a total maximum value of the RGB color signals;

comparing the maximum values to detect the color signal having a higher maximum value than the others;

if one of the maximum values is higher than the others, generating another RGB color signal having a color temperature increased to a predetermined value; and

comparing the total maximum value with a predetermined critical value and generating another RGB color signal, having a brightness increased or decreased based on the comparison result.

35. (WITHDRAWN) The computer-readable medium according to claim 34, wherein in if the total maximum value is greater than a first predetermined critical value, determined in case where the brightness level of pixels in an area of the screen from which the total maximum value is detected corresponds to substantially full white, then the brightness level of an image is decreased by a predetermined ratio to generate another RGB color signal having decreased brightness, and if the total maximum value is less than a second predetermined critical value, determined in consideration of a case where the brightness level of pixels in the area of the screen from which the total maximum value is detected corresponds to substantially full black, then a brightness level of the image is increased by a predetermined ratio to generate a RGB color signal having increased

36. (PREVIOUSLY PRESENTED) The apparatus of claim 1, wherein the RGB color signal generator detects a total maximum of the RGB color signals compares the total maximum value with the predetermined critical value, and generates RGB color signals so as to increase or decrease the brightness level of the image displayed on the screen.

37. (CANCELED)

38. (CURRENTLY AMENDED) A method of adjusting brightness and a color temperature of a screen on which input RGB signals are displayed, the method comprising:

detecting and storing maximum values of each of the RGB color signals;

comparing the maximum values to detect a color signal having a higher maximum value than the other color signals;

increasing a color temperature of the detected color signal to a predetermined value to compensate for the color temperature of the detected color signal if the color is detected; and

generating RGB color signals so as to increase or decrease a brightness level of an image displayed on the screen by one of a plurality of predetermined ratios;

detecting and storing a total maximum value of the RGB color signals; and

comparing the total maximum value with a predetermined critical value,

wherein generating the RGB color signals so as to increase or decrease the brightness level of the image displayed on the screen is based on the comparison result for the total maximum value with the predetermined critical value,

wherein generating the RGB signals generates RGB color signals having decreased brightness by decreasing the brightness level of the image by one of the plurality of the predetermined ratios if the total maximum value is greater than a first predetermined critical value, determined in a case wherein a brightness level of pixels in an area of the screen from which the total maximum value is detected corresponds to full white,

wherein generating the RGB color signals generates RGB color signals having increased brightness by increasing the brightness level of the image by one of the plurality of the predetermined ratios if the total maximum value is less than a second predetermined critical value, determined in consideration of a case wherein a brightness level of pixels in the area of the screen from which the total maximum value is detected corresponds to full black, and

wherein the detecting and storing a total maximum value of the RGB color signals includes windowing a predetermined area of the screen, and then detecting the total maximum value of the RGB color signals in the predetermined area.

39. (CANCELED)

40. (CURRENTLY AMENDED) The method according to claim ~~39~~38, wherein the adjusting the brightness and the color temperature of the screen are automatic.

41. (CANCELED)